

Laptop Assistant (Ubuntu) using Python

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Abstract— Digital devices now a days have gradually become more powerful, in influencing our daily lives on a larger scale. Laptop is one of them there are many laptops in market from different-different companies like (Apple, Dell, hp) which make humans work very easily. It helps to store the data and other confidential information. Virtual assistant is also helping to getting and storing information/data in very easy manner. User everything to do with the help of System assistant. And to developing those kinds of tool and application python is help to developing. It has many-many libraries to develop different-different application. The purpose of this thesis was to build an Ubuntu (Linux) Laptop Assistant Tool for the Linux users to give same rest of their hands. This Assistant is a basic level assistant which done some tasks for the user and also to the machine. Laptop Assistant does the task which are required by the user by “say” something. This Assistant is not a Desktop Application it is a tool which are do some lengthy tasks in very easy way. This tool gets your instruction and do task according to the requirement. The main purpose is to build the ubuntu assistant is that the linux not have any laptop assistant like (Google assistant, Cortana, Siri). The Tool Ubuntu (linux) Laptop Assistant are obviously based on the Python.

Keywords— Python, Ubuntu, Laptop Assistant.

I. INTRODUCTION

Laptop Assistant help to enhance the digitization to are systems. It also so helps to do lengthy tasking to very easy. In Linux there is no inbuilt Assistant like software so it's encouraged me to build this type of tool and software which help to increase the performance of the system and it gets less amount of time to their tasks.

Linux is an open-source Unix-like operating system. It based on the Linux kernel an operating system kernel first released on September 17, 1991, by Linus Torvalds Linux is typically packaged in a Linux distribution. The Linux kernel and supporting system software are provided by the GNU project. Many Linux distributions are present in this world who uses the word “Linux” in their name, whereas free software foundation uses the name GNU/Linux to emphasize the importance of GNU software, causing some controversy.

II. CONCEPT(THEORY)

1. Linux:

Gnu / Linux is an open source, Unix-like operating system. It is based on the Linux kernel. It was first released on September 17, 1991 by Linus Torvalds (1).

Distributions include the Linux kernel, system software, and the GNU project as a library. Many Linux distributions use the word “Linux” in their name, but the Free Software Foundation uses the name GNU/Linux to emphasize the importance of GNU software, which has been a source of some controversy.

1.2 Linux Kernel.

The Linux kernel is a free and open plan, monolithic, Unix-like operating system that is installed on several computers, personal computers, mobile devices, personal computers, mainframes, and supercomputers to embedded devices such as routers, wireless access points, private apartments, separated, or set-top boxes, FTA receivers, smart TVs, personal video recorders, and NAS). In its presence, and the development and support, and this has led to a lot of benefits to operating systems which are most commonly referred to as Linux.

When is the release date for the Linux kernel for desktop computers, computer games, and is part of the Android operating system, a Linux-based operating system, which dominates almost all the computer hardware, the segments, in particular, the use of the Android operating system for tablet computers, smartphones and a smartwatch?

1.3 On Linux:

A Linux distribution (often abbreviated as distro) is an operating system that is based on the Linux kernel and, often, a package management system. Linux users usually obtain their operating system by downloading one of the Linux distributions, which are available in many different systems, ranging from embedded devices (such as LACE) and a machine (like Linux Mint) to powerful supercomputers (such as, Rocks Cluster Distribution).

A cluster Distributed Linux distribution is the Linux kernel, the GNU utilities and libraries, additional software, and even systems (often referred to as the X Window System).

Linux Ubuntu:

Ubuntu is a free and open-source Linux distribution based on Debian. Ubuntu is officially available in three editions: Desktop, Server, and Core™ mobile devices, robots, and Internet of things. All of the versions running on the same machine or on a VM.

Ubuntu is a popular cloud computing, an operating system with OpenStack support.

Ubuntu is released every six months, with long-term support (LTS) is released in the past two years. The latest release is 19.10 ("Eoan Tiger"), and the latest long-term support release is 18.04 LTS ("Bionic Beaver"), which is supported until 2023, as part of the support of the government, and by 2028, a paid-for version.

Ubuntu is developed by Canonical and the community of developers, as well as part of a community governance model. The governance model, including that of safety, support, and updates for any version of Ubuntu, starting from the date of issue and until the release reaches its designated end-of-life (EOL) date. Canonical generates revenue through the sale of additional services related to Ubuntu.

1.4 k.LINUX:

Linux is used in many products. It is found in many non-user products, such as televisions and network routers. Linux managing services in which users are not satisfied with Linux. Remember, servers, farms, and big data, and cloud solutions.

Analytics and Big Data markets in the host and Linux platforms and applications in data centres and in the cloud.

The C is an easy-to-use and powerful programming language. It has efficient high-level data structures and a simple but effective approach to object-oriented programming. Python's elegant syntax and dynamic typing, together with its interpreted nature, make it an ideal language for scripting and rapid application development in many areas on most platforms (2).

The Python interpreter and the extensive standard library are freely available in.

2. PYTHON:

2.1 INTRODUCTION:

Python is an easy-to-use and powerful programming language. It has efficient high-level data structures and a simple but effective approach to object-oriented programming. Python's elegant syntax and dynamic typing, together with its interpreted nature, make it an ideal language for scripting and rapid application development in many areas on most platforms.

The Python interpreter and the extensive standard library are freely available in source or binary form for all major platforms from the Python web site, <https://www.python.org/> and is free to move. So, the page also contains distributions of and are indicators of a lot of the free Python plug-in programs and tools, and additional documentation.

Python can be easily extended with new functions and data types implemented in C or C++ (or any language closely related to C). Python is also suitable as an extension language for custom applications.

In this tutorial, informally introduces the reader to the basic concepts and features of the Python language and system. It helps to have a handy Python interpreter is able to get hands-on experience, but all examples are self-contained, so the tutorial can be read offline.

2.2 Why Need Python

Python is a general-purpose and high-level programming language. You can also make use of the Python language to create a desktop graphical applications, websites and web applications. Also, Python, as a high-level programming language, web app you to focus on the core functionality of the application, taking care of common programming tasks. A simple programming language, syntax highlighting rules, making it even easier for you to maintain, it is a code that is readable and maintainable by your application. There are a number of reasons as to why

you should choose Python and other programming languages.

The 7 Reasons Why You Should think about how to write Applications in Python

- 1) It is easy to read, easy-to-maintain code
- 2) Multiple Programming Paradigms
- 3) It is compatible with the major platforms and systems
- 4) Robust Standard Library
- 5) Many open source frameworks and tools

2.3 SPEECH RECOGNITION

Speech recognition is rooted in research at Bell Labs in the early to mid-1950s. Early systems were limited to a single speaker, and had a limited vocabulary of about a dozen or so words. Modern speech recognition systems have come a long way since their ancient counterparts. They recognize it as the voice of many of the speakers have a rich vocabulary in a variety of languages.

It is the first element of the speech is, of course, made a speech. The speech must be converted from physical sound to an electrical signal using a microphone, and then to digital data with an analog-to-digital converter. Once digitized, some models can be used to decode the audio into text.

Most current speech recognition systems use Hidden - model. This approach is based on the assumption that a speech signal that is to be discussed at a short time scale (say, ten milliseconds), it can be rationally viewed as a steady-state process, i.e., a process in which the statistical properties do not change over time.

In a very time UNIVERSITY, the speech signal is divided into 10 milliseconds, a number of fragments. The range of range elegant, which is kind of a plot of signal power versus frequency is mapped to a vector of real numbers is well-known as a Mel-frequency cepstral coefficients. The magnitude of this vector is typically small, and sometimes up to 10, but with more revision systems will have a size of 32 or more. The result is you feel, and the order of the vectors. Translate voice to text, which are groups of vectors may be mapped to one or more of the phonemes—the basic unit of the language. The calculation will require training as well as the sounds of phonemes varies from speaker to speaker. And even fluctuates, and that's one thing to another.

2.4 LIBRARIES

The Python standard library is very extensive, offering a wide range of functions, such as is shown in the long, below the content. The library contains built-in

modules (written in C) that modules access to the functionality of the system, such as a file, for input, the butut, which would otherwise be available to Python developers, and the modules are written in Python, that is, by default-solutions for the many problems in day to day programming. Some of them are y p designed to inure and enhance the inure of Python programs by starting elegant into platform-neutral API.

2.4.1 PYTTX3

It is a library for text-to-speech functions in Python. In contrast to other libraries, it works offline, and is compatible with both Python 2 and Python 3. The application calls the factory function `pyttx3.init()` to get a reference to the `pyttx3`. An example of an engine. This is a very easy-to-use tool that converts text-to-speech.

The `pyttx3` module supports two rounds of voting: the first woman and the second-in-command, which is generated by the `sapi5` on Windows operating systems.

It supports three text to SPEECH engine

- * SAPI5-SAPI5 on Windows
- * seeking – talking to a different platform

2.4.2 OS

This module in python provides functions for intertying with the operating system. The OS, including the default ones are Python modules. This module provides a retablo way of using functions, which are dependent on the operating system. It is *so* me *so* modules include many functions to mammonite with the system. The "mesosystem"

2.4.3 DATETIME

In Python, date, and time as a native data type, but a module named `datetime` can be imported to work with the date and the time. The `Date` and `time` the module is built into Python, so there is no need to set it up in the air.

The `Datetime` module sulkies losses for working with dates and times. These losses provide a number of functions for working with dates, times, and intervals. The `date`, `datetime` are the `Nd` intern in Python, so when you manipulate them, you are truly manipulating elegant, not strings, or a time-stamp (5).

2.4.4 WIKIPEDIA

Wikimedia is a Python library that makes it easy for you to access and makes the data from It. Search in Wikimedia, link to select resumes, select, select, such as the links and the pictures on the site, and much, much

more. Wikimedia is run by the Miyawaki’s API, so that you can focus on using Wikimedia data, instead of getting out of it.

2.4.5 WEB BROWSER

The web browser module provides a high-level interface to the display of the user of web documents. In the majority of sees, simply lolling the open () function from this module will be to lolling it.

Under Unix, graphical browsers are working under X11, but text-browsers as a graphical web browser, and / or to the X11 display is not available. If you are using a text only browser, the calling process will be blocked until that user logs out of your web browser.

If the BROWSER environment variable is not present, it is interpreted as a replacement of the default

browser of the platform, as a background of case splits and the list of browsers to try in turn. If the value is a part of the list that contains the charter string “%s”, which is interpreted as a literal browser string is a string that is used in the URL of the argument is to be replaad by the %s; if the part does not replaad %s, it is simply interpreted as the name of your browser to run it.

2.4.6 CV2

OpenCV was launched at Intel in 1999 by Gary Brodsky, and the first version of which was released in 2000 year. Vadim Isarescu has joined Gary Brodsky-to-leading Intel’s Russian software OpenCV team. In 2005, OpenCV was used on Stanley. OpenCV now supports a number of algorithms related to computer vision and machine learning, and growing by the day-to-day.

III. PROJECT SCREENSHOTS

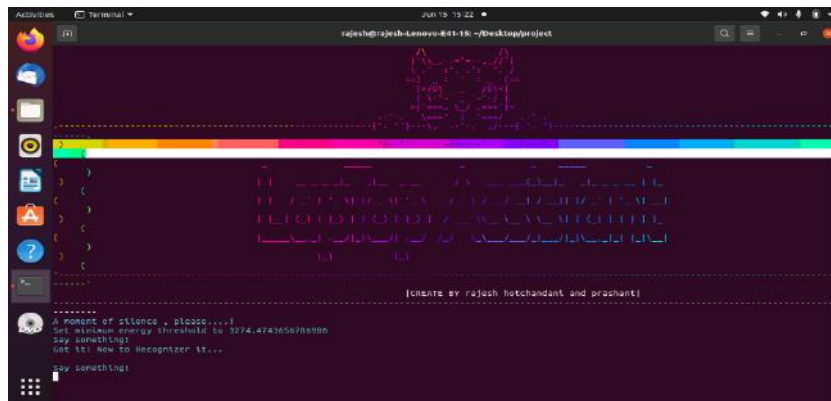


Fig. 1 Laptop Assistant start

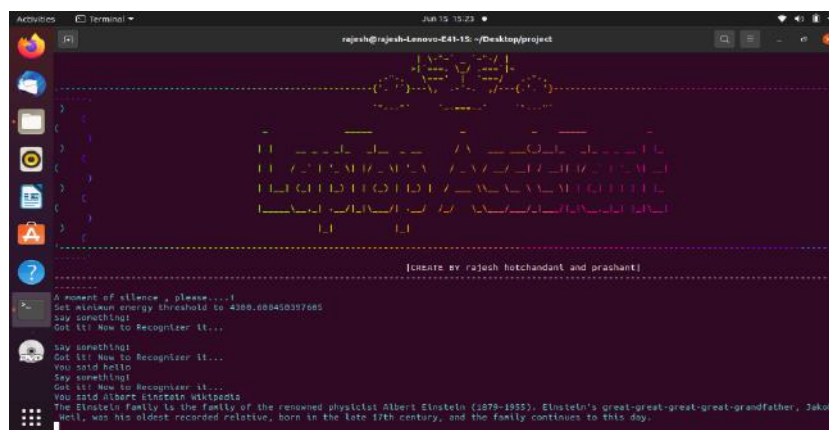


Fig. 2 Wikipedia works

IV. RESULT

This laptop assistant is working fine and if we want to develop it further we can do this. It Made Ubuntu more friendly and convenient in use

V. CONCLUSION

Many people are not so used to use Ubuntu and find it difficult in doing tasks on ubuntu so, with the help of our project we hope to solve their problems and do tasks easily and fastly by just saying the tasks. It will make ubuntu operating system more user friendly and will save the time also.

In conclusion we are planning to go further development in this project to add machine learning and artificial intelligence so it could evolve further by using large data sets.

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REFERENCES

- [1] <https://itcsnam.com/itcsnam/consulting/>
- [2] <https://docs.python.org/3/tutorial/#:~:text=Python%20is%20an%20easy%20to,approach%20to%20object%20oriented%20programming.>
- [3] <https://realpython.com/python-speech-recognition/>
- [4] <https://www.geeksforgeeks.org/os-module-pythonexamples/#:~:text=The%20OS%20module%20in%20Python,using%20operating%20system%20dependent%20functionality.>
- [5] <https://www.geeksforgeeks.org/python-datetime-module-with-examples/#:~:text=Datetime%20module%20supplies%20classes%20to,and%20not%20string%20or%20timestamps.>